



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D205-596-101
Job Sheet 179521



Part No: D205-596-101

Job Qty: 1 ea

Part Name: Fwd Crosstube - Extended Height 39"



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/20/18

Job Tracking No:

Due Date: 7/27/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: D205-594-101 REV.C IPP Rev G Removed Bending 05-10-25 JLM IPP Rev:H ECN 1075 08-01-10 DD IPP Rev I 08.04.28 Added bending & mat'l EC verified by: DD IPP Rev:J 08-08-19 remove QC4 DD verified by:EC IPP REV:K 13.11.29 as per dwg DEO B-2 DD VERF:JLM IPP REV:L 18.02.08 AS PER DWG REV.C DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		7/27/18	0.00	0.00	Start Up Crosstubes-1		GP 18-06-21
105	HandFXtube	1 pcs		7/27/18	0.00	0.58	HandFinish5		GP 18-06-21
107	QC	1 pcs		7/27/18	0.00	0.00	QC7-1		BE
110	CNC Bend Crosstubes	1 pcs		7/27/18	1.84	0.00	CNC Bend Crosstube		GP DAS 38
130	QC	1 pcs		7/27/18	0.00	0.00	QC15		38
140	Crosstubes	1 pcs		7/27/18	0.00	1.86	Crosstubes-1		OP 9-89 GP
150	HandFXtube	1 pcs		7/27/18	0.00	0.58	Crosstubes-3		OP DAS GP
160	QC	1 pcs		7/27/18	0.00	0.00	QC7-1		38 DAS
170	QC	1 pcs		7/27/18	0.00	0.00	QC5		9-89 38
180	SprayPaint	1 pcs		7/27/18	0.00	1.73	Spray Paint		AB JUL 14 2018
190	QC	1 pcs		7/27/18	0.00	0.00	QC14		
200	Crosstubes	1 pcs		7/27/18	0.00	1.86	Crosstubes-1		AB DAS JUL 15 2018
210	QC	1 pcs		7/27/18	0.00	0.00	QC5		21 38
215	DC	1 pcs		7/27/18	0.00	0.00	DC		21 9-89 AUG 14 2018
220	Packaging	1 pcs		7/27/18	0.00	0.00	Packaging3-1		BB 18/08/14
230	QC21-FG	1 Ea		7/27/18	0.00	0.00	QC21		DAS

Part Op 105 - INSIDE AND OUT

Descriptions: 110 - Bend as per Dwg D2889 using CNC bender program

130 - Mark 38.3" for cutting from tangential line in the straight section from D2889 as per Dwg wall template. ***Identify off-cuts with batch number & part number and bring them to cnc lathe***

140 - 1-Cut as per Dwg D205-596-101 2-Deburr & Inspect for surface damage. Polish cut surface.Scribe part # and Batch # on one end of tube.

150 - ***IMMEDIATELY AFTER GRINDING***

180 - 1-Prime inside and outside per QSI 005 4.2 PRIMER BATCH: 138847 2- Paint outside as per dwg QSI 005 4.2 PAINT BATCH: 138875

200 - 1- Lightly scuff the bonded area using a 180 grit sand paper and clean the area with 41058 wash 'n' wipe 2- Apply Proseal as per dwg D205-596-101. A/R Proseal 890 B-2 Batch: 138845 EXP: 11/18 3- Install clamps as per dwg (Note 12) Torque clamps 80 to 100 in-lb as per dwg and Note 13)

210 - ***PRIOR TO PACKAGING RECHECK TORQUE ON CLAMPS AFTER PROSEAL HAS CURED 72HOURS.***

220 - Identify and pack for shipping as per PPP D205-596-101

DAS 10 CH6003 9-89

DAS 21 9-89

see attachment

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
				24/01/2020	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D6005-180	Crosstube Material	1 Ea (1 ea)	90-Start up Operation	
D2893-1	Support	2 Ea (2 ea)	200-Crosstubes	
D3595-063-450	Rubber Cushion 0.63" Wide X 4.50" Long	4 Ea (4 ea)	200-Crosstubes	
MS21920-25	Clamp	4 Ea (4 ea)	200-Crosstubes	

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6005-180	1	16	0
200-Crosstubes	D2893-1 <i>S083028</i>	②	1	0
	D3595-063-450 <i>S078312</i>	④	132	0
	MS21920-25 <i>S071411</i>	④	140	0

Part Specifications				
Specifications could not be found.				

Plex 6/20/18 8:05 AM dart.lacelle.linda



Container No: S082896



Part: D205-596-101

Job No: 179521

Serial No/Batch: S082896

Revision: C

Inspector:

Exp Date:

Instructions:

DART Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 06/21/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

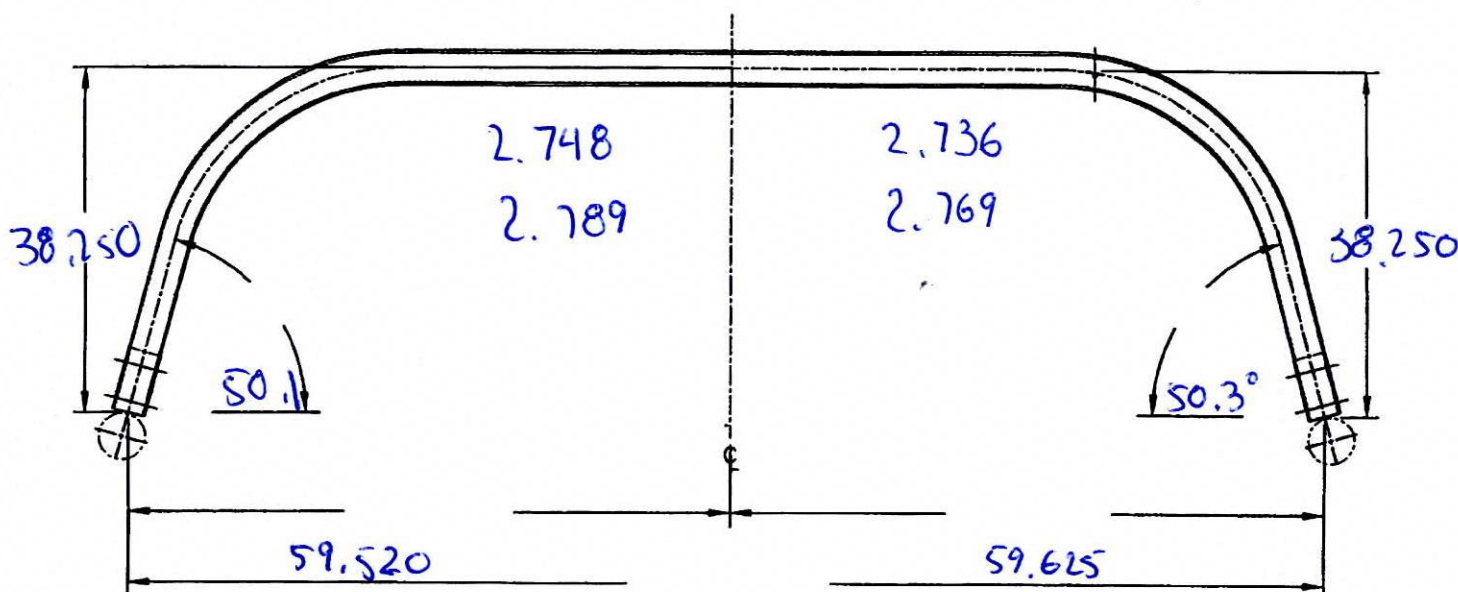
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order: 179521
Description: Crosstube High-High Fwd		Part Number: D205-596-101
Inspection Dwg: D205-596-101 Rev: B		Page 1 of 1

Required Dimension	Min	Max
Height	38.2	38.4
1/2 Span	59.5	59.7
Angle	49	52
Total Span	119.0	119.4
Bending Passes	3	--
Crushing	--	6%



	Side A	Side B
Bending Passes	11	11
Crushing	0.7%	0.6%
Comments		

QC15 Inspection	AP
Date	18-06-25

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	08.04.21	Dwg Rev updated	KJ/JM	
C	12.04.16	Added bending, crushing dimensions	KJ	

Change Record

PAGE 1 OF 1

Part Number: D205-596-101/-103/-105/-107

Description: CROSSTUBE ASSEMBLIES

[illegible]